FIELD NOTES ON NEORHYNCHOCEPHALUS SACKENII (WILLISTON) IN MISSOURI

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During the summer of 1949 I found myself in a locality where for a time the adults of *Neorhynchocephalus sackenii* were quite common. This was at the Washington University Farm, 7 miles S. W. of Clarksville, Pike County, Missouri. Although I was engaged primarily in a botanical study, the actions of these flies captured my interest to the extent that I spent many hours in the field observing them. Some of the notes I took at the time may be of interest to other naturalists. The fly's identification was made by Dr. J. Bequaert of the Museum of Comparative Zoology at Harvard, who informs me that the species is now recorded for the first time from Missouri.

The flies came to my attention by the noise they made in flight. Usually I heard the fly, turned and saw it hovering, whereupon I would sit on the grass for comfort. After a time the fly would alight on a grass stalk, and the observation period would begin. Its attitude when it alights somewhat resembles that of a Damsel Fly, *i.e.*, the six legs reach out in front and grab on to a vertical stalk. The body rests off to the side at an angle approaching the horizontal. When in this attitude the fly is not easily flushed. It is possible to approach to within about 18 inches for a close look. The flies remained still unless I made an "overt" move, when the wings would flutter slightly, preparatory to taking off. During these observation periods I never was able to out-wait the flies. I tired after about an hour, and when I arose my quarry would fly away.

In flight these flies made a very distinctive sound, so distinctive that almost without exception it was the sole means I used to locate them. The tone was clear, resonant and very steady—the latter characteristic serving to distinguish them from other similarly sounding flies and bees. When hovering, the tone emitted is F on the musical scale at 90° F, as determined with the aid of a tuning fork. When alarmed the tone drops a major third as the fly darts away with great speed in a straight line.

The flies were active during all daylight hours from July 28 to August 15. None were attracted to a light I installed in the pasture. Females were common, but I only captured one male. Oddly enough they appeared only in one portion of the 3-acre pasture where I found them, and not in any other similar pastures which I visited in other parts of the same county.

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I recorded a curious phenomenon which I pass on without comment. In life the eyes are a striking, almost irridescent blue-green. After a short time in the cyanide jar they become dull reddish-brown. But when captured in a net, before placement in the jar, the eyes turn a fiery orange.

Professor Bequaert tells me that, so far as is known, the early stages of our Nemestrinidae parasitize grasshoppers. *N. sackenii* was bred in British Columbia by Spencer (1945) from *Melanoplus mexicanus,* and by York and Prescott (1952) in Mountana from *Melanoplus mexicanus, M. alpinus, M. dawsoni, M. infantilis* and *Encoptolophus sordidus costalis.* It seems to confine its attacks to the Acrididae. Of this family the following were most abundant in the pasture at the University Farm at the time of observation: *Melanoplus differentialis; M. femur-rubrum; M. mexicanus; Arphia xanthoptera; Dicromorpha viridis; Orphulella speciosa; Orphulella* sp.; *Neotettix* sp.; *Hippiscus* sp.; *Dissosterira carolina.*

Robertson (1928) observed *N. sackenii* at flowers of Yarrow (*Achillea Millefolium*) in Illinois. This ubiquitous weed was found in our pasture along the fences; but none of our flies were observed visiting flowers. In the collecting area the most abundant Composite in bloom was Chickory (*Chichorium intybus*), and the disappearance of the flies coincided with the mowing which cut these plants back.

Literature Cited

Robertson, C. 1928. Flowers and Insects, p. 47., Carlinville, Illinois.

Spencer, G. J. 1945. Proc. Ent. Soc. British Columbia, XLII, p. 18.

York, G. T. and Prescott, H. W. 1952. Jl. Econ. Entom., XLV, pp. 5–10.

A Note on the Swarming Habits of Ogcodes dispar (Macq.) On July 12, 1952, a number of flies identified as *O. dispar* by Dr. C. W. Sabrosky were seen swarming about twelve feet above the ground in a heavily wooded area at the edge of a logging trail. The individuals were flying back and forth in a zig-zag fashion and occasionally one would detach itself from the group and spiral down to alight on the upper leaves or twigs of a white ash (*Fraxinus americana* L.). This sapling measured about 4½ to five feet in height; and although there were other small trees and shrubs in the vicinity, the cyrtids landed only on this particular tree. Sabrosky (1948) (American Midland Naturalist. 31: 385–413) noted that a similar, although not quite so restricted prefer-